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# GORTDRUM MINES LIMITED

SIXTH
ANNUAL
REPORT

1969

FOR THE YEAR ENDED DECEMBER 31

# SIXTH ANNUAL REPORT
# GORTDRUM MINES LIMITED
AND ITS WHOLLY OWNED SUBSIDIARY
# GORTDRUM MINES (IRELAND) LIMITED
FOR THE YEAR ENDED DECEMBER 31, 1969

Concentrator complex of Gortdrum Mines (Ireland) Limited, County Tipperary, Ireland. Left centre shows new mercury extraction facility; mine office and laboratory building centre foreground.

## GORTDRUM MINES LIMITED

### Officers
Patrick J. Hughes, President
George T. Smith, Vice-President
Dr. Duncan R. Derry, Vice-President
Murray K. Pickard, Vice-President of Operations
G. Warren Armstrong, Secretary
John A. Palmer, Treasurer

### Board of Directors
G. Warren Armstrong, Toronto, Canada
Dr. Duncan R. Derry, Toronto, Canada
Matthew Gilroy, Dublin, Ireland
James A. Harquail, Toronto, Canada
Patrick J. Hughes, Dublin, Ireland
Dr. W. F. James, Toronto, Canada
J. K. McCausland, Toronto, Canada
George T. Smith, Toronto, Canada

### Shareholders' Auditors
Thorne, Gunn, Helliwell & Christenson, Toronto, Canada

### Bankers
The Toronto-Dominion Bank, Toronto, Canada

### Transfer Agents
Crown Trust Company, Toronto, Canada

### Executive and Head Office
Suite 2602, Royal Trust Tower
Toronto-Dominion Centre
P.O. Box 27, Toronto, Canada
Telephone No. Area Code 416—362-2781
Telex No. 06-217766
Cable Address "GORTDRUM", Toronto, Canada

### Shares Listed
Toronto Stock Exchange, Toronto, Canada

Patrick J. Hughes — President Gortrdum Mines Limited and Chairman of the Board, Gortdrum Mines (Ireland) Limited.

## PRESIDENT'S REPORT

The Board of Directors present the Sixth Annual Report of the Company and its wholly owned subsidiary, Gortdrum Mines (Ireland) Limited, together with the audited consolidated financial statements for the year ended December 31, 1969. A report on operations reviewing this fiscal period and the subsequent three months ended March 31, 1970, is also included.

### Mining Operations

During 1969, the concentrator treated 516,764 tons of ore for an average daily rate of approximately 1,415 tons. Throughout most of the year, ore was selectively mined to provide concentrator feed that was relatively low in mercury content in order to produce concentrates acceptable for shipment without prior roasting for mercury recovery.

As a result of the selective mining program, a considerably greater tonnage of ore was mined than would normally be required. A total of 977,600 tons were mined during the year, of which 460,836 tons were stockpiled for future treatment. This included some lower grade material as well as ore comparatively high in mercury content. In future operations it is planned to blend ore from the various stockpiles with ore mined from the open pit to provide a balanced feed to the concentrator and subsequent roasting in the mercury recovery plant.

The present production schedule envisages the treatment of some 120,000 tons from the stockpiled ore during 1970; 50,000 tons in 1972, and thereafter at increasing proportions in relation to the ore mined from the open pit. The estimates of ore reserves in the open pit and stockpiled ore, as at January 1, 1970, are included in the 'Report on Operations'.

### Mercury Plant

The mercury extraction plant commenced operation on a tune-up basis during July of 1969. Certain mechanical difficulties were experienced during the tune-up period, principally with respect to the cooling of the calcine, which necessitated

Mercury extraction plant at the site of the copper-silver-mercury mine complex, County Tipperary, Ireland. This facility was commissioned during July of 1969 and is now recovering by-product mercury from the concentrates.

some modifications and additions to the plant. A more continuous operation was achieved latterly in the year, but still well below rated capacity.

Total roasted concentrates produced from the mercury plant during 1969 was 2,669 tons with 420 flasks (76 lbs. per flask) of mercury recovered. Owing to the necessity of re-cycling some partially roasted concentrates and the tie-up of mercury in the circuit, it has been difficult to accurately determine mercury recoveries.

While operations were improved during the first quarter of 1970, some of the problems still persist. Output for the three months ended March 31, 1970, amounted to 2,692 tons of roasted concentrates with 316 flasks of mercury recovered.

## Production

Concentrate production during 1969 amounted to 13,153 tons which compares with 14,661 tons produced in the preceding year. The decrease was due to lower metallurgical recoveries and the moderately lower average grade of ore treated, however the concentrates produced were of higher grade.

The present forecast of operations for 1970 assumes the treatment of 530,000 tons of ore and concentrate production totalling about 13,960 tons. Although it is difficult to project the operation of the mercury plant, the tentative schedule for 1970 anticipates the treatment of approximately 12,300 tons of concentrates and the recovery of about 1,440 flasks of mercury.

## Financial

Owing to marketing arrangements and the necessity of stockpiling certain concentrates for treatment in the mercury plant, there is a disparity between concentrate production and concentrate shipments (sales) during specific periods since operations commenced in mid-1967.

This would not be a significant factor over a prolonged period of operation or if a closer balance could be achieved between concentrate production and concentrate shipments. However, under the circumstances prevailing from 1967 and expected to continue until 1972, this disparity has the tendency to vary income either above or below levels of normal mine operation.

The following table of concentrate production versus anticipated shipments during this period illustrates the situation:

| Year | Tons Concentrate Produced | Tons Concentrate Roasted | Tons Concentrate Shipped |
|---|---|---|---|
| 1967 | 2,246 | | 1,464 |
| 1968 | 14,661 | | 7,480 |
| 1969 | 13,153 | 2,669 | 15,786 |
| 1970 (est.) | 13,960 | 12,000 | 11,880 |
| 1971 (est.) | 14,460 | 15,150 | 16,910 |
| 1972 (est.) | 15,260 | 15,150 | 15,190 |
| 1973 (est.) | 14,830 | 14,800 | 14,090 |

(Note: In the above table, the first column reflects the actual or estimated production of concentrates prior to treatment, as required, in the mercury extraction plant; the second column is the output of concentrates after treatment in the mercury plant. In connection with the latter processing there is a reduction of tonnage volume but no significant change in the copper and silver content following the removal of the mercury.)

In an effort to further clarify the influence of these factors for the information of shareholders, it is noted that under the accounting procedure employed, revenue is the value realized from shipments of concentrates made during the period rather than the estimated value of actual mine production of concentrates.

As shown on the attached consolidated statement of income, operating expenses, with the exception of the provision for government royalty, are those attributed to mining, milling and other related costs incurred during the operating period including interest on funded debt as well as the non cash write-offs for depreciation and amortization.

In calculating operating income, the inventory of concentrates at the beginning of the period, which is valued at cost, is added to the operating expenses, and the inventory of concentrates and metals on hand at the end of the period is then deducted from this sub-total (first-in, first-out accounting basis).

Other incidental expenses and non-operating revenue are then taken into account in arriving at the consolidated net income for the year.

Cash flow for the year ended December 31, 1969, was $3,186,000 equal to 83¢ per issued share compared with $1,424,000 or 37¢ per share for the preceding year. Net income for the year was $1,986,000 equal to 52¢ per issued share compared with $391,000 or 10¢ per share for 1968. The statement of income does not include any revenue from by-product recovery of mercury as the value of this production was offset against start-up costs of the mercury plant.

### Preliminary First Quarter Results

During the three month period ended March 31, 1970, the concentrator treated 133,867 tons of ore and concentrate output amounted to 3,312 tons. The comparative figures for the corresponding period in 1969 are 133,074 tons treated and concentrate production of 3,644 tons.

Shipments of concentrates for the three months ended March 31, 1970, totalled 2,195 tons and the revenue, after deducting shipping, smelting and marketing expenses, was $1,126,000. Concentrate shipments for the corresponding period in 1969 amounted to 5,338 tons and the revenue, after deducting shipping, smelting and marketing expenses, was $2,185,000.

Cash flow for the three months ended March 31, 1970, was $549,000 equal to 14¢ per share and net income was $310,000 equal to 8¢ per share. An operating loss of $32,900 in connection with the mercury plant is reflected in the income for this period. These figures are subject to final audit.

The comparative figures for the corresponding period in 1969 are cash flow of $959,000 or 25¢ per share and net income of $696,000 or 18¢ per share. (Note that in the first quarter of 1970 concentrate shipments were considerably below that of the corresponding period in 1969.)

### Marketing

The current forecast of operations indicates that certain of the concentrates available for shipment during 1970 to 1976 inclusive, will be relatively high in arsenic and antimony content. For this reason it will be necessary to arrange the marketing of some of the concentrates during this period separate from the existing agreement with Rio Tinto Patino S.A.

As stated in the 1968 Annual Report, the Company entered into an agreement with Rio Tinto Patino S.A. covering the sale of a portion of the scheduled 1970 shipments of concentrates. Under existing arrangements, it is expected that some 7,280 tons of concentrates will be shipped to Rio Tinto Patino S.A. during 1970; 4,400 tons in 1971; and thereafter in increasing amounts during the years 1972 to 1975 inclusive.

During May of 1970, a shipment of 1,845 tons of concentrates was made to a Canadian custom smelter. The expected net smelter return will be lower than that which would be anticipated from the marketing arrangements with respect to the concentrate shipments to Rio Tinto Patino S.A.

Present projections envisage that a total of approximately 86,350 tons of concentrates will be available for shipment during the period from 1970 to 1976, inclusive. This is based upon the expected treatment of 3,270,000 tons which includes the stockpiled ore and the ore to be mined from the open pit, down to and including Bench No. 14 in the east end. Since neither the method nor feasibility of mining the ore below Bench No. 14, as well as other tonnages not presently included in reserves, have as yet been resolved, such material has been excluded from present production calculations.

With the exception of the above mentioned 1,845 tons already shipped and a further estimated 13,105 tons of similar characteristics which are expected to be available for shipment during 1970 to 1976, the arsenic and antimony content of the remaining approximate 64,120 tons of concentrates is expected to be within acceptable limits for normal smelter treatment and therefore should not present any unusual marketing problems.

### General

The Company's wholly owned subsidiary, Gortdrum Mines (Ireland) Limited, is continuing exploration on the block of prospecting licences

covering an area of approximately 56 square miles, centered broadly on the mine and extending principally eastwards and westwards covering ground in Counties Tipperary and Limerick.

During 1969, detailed second-stage geochemistry was completed over areas of interest indicated by primary stage soil sampling within the block, and a review of all information obtained to date was undertaken.

Diamond drilling was initiated at the end of October to investigate the possible coincidence of various geochemical anomalies with a likely limestone-sandstone contact to the east of the Gortdrum Mine, and to test other geochemical targets.

Within the possible contact zone, which is presently being examined between 1,200 and 4,600 feet east of the mine open pit, six holes were drilled in 1969. This program continues and at the end of March, 1970, approximately 3,000 feet has been drilled in 13 holes. While only scattered intersections of copper mineralization have been encountered to date, results are considered interesting and justify the continuation of drilling westward toward the mine and also further eastward where geochemical evidence only is presently available.

The Company is also active in exploration in Ireland outside the mine area with a total of nine separate prospecting licence groups being explored. This program is under the direction of D. R. Derry Limited, a Toronto-based consulting group with considerable experience in Ireland.

In addition to the geological, geochemical and geophysical surveys carried out during 1969, systematic pattern drilling, as part of a long range program, is scheduled for a licence group in the Glennamaddy Area of Counties Galway and Roscommon in 1970. Follow-up exploration, mostly diamond drilling, has also been recommended by the Company's consultants in the Moate-Ferbane licence area in Counties Offlay and Westmeath, where previous drilling indicated a small zinc-lead zone. A property with newly discovered copper occurrence has been optioned in County Cork.

The Company holds 250,000 shares equal to approximately 5% of the presently issued capital of Avoca Mines Canada Limited. The latter company owns Avoca Mines Limited which is currently engaged in preparing the Avoca copper deposit in County Wicklow, Ireland, for planned start-up early in 1971. This was the former producing St. Patrick mine which closed down in 1962. The property is being reactivated at an estimated cost of $4.5 million and the initial production rate planned is 2,000 tons per day. Ore grade is stated to be around 1.0% copper and by-product recovery of pyrite concentrates is also planned.

The Board of Directors is pleased to announce the recent appointment of Mr. George T. Smith as Vice-President. Mr. Smith, who has been a Director of the Company since incorporation, replaces Mr. Robert E. Fasken who resigned as of February 28, 1970.

As set out in the notes to the financial statements, a claim was made against the Company's wholly owned subsidiary, Gortdrum Mines (Ireland) Limited, for loss of profits arising out of the alleged repudiation of obligations under a concentrate sales agreement and for damages as a result of the unexpected presence of mercury in the concentrates. The claim was settled in 1969 at a cost of approximately $300,000 and the sales agreement was terminated by mutual consent.

At the 1969 Annual Meeting, shareholders approved the employee stock option plan, authorizing the granting of stock options to purchase up to 250,000 shares, exercisable over a period of five years. No options have as yet been granted under this plan.

The Directors wish to express their appreciation to all members of the Company and its consultants for their effective efforts during the past year.

On behalf of the Board of Directors,

Pat. J. Hughes.

"Pat. J. Hughes"
President

June 1, 1970.

GORTDRUM MINES LIMITED
View from main concentrator building showing reclaim conveyor from fine ore storage pile at the copper-silver-mercury mine, County Tipperary, Ireland.

# FINANCIAL STATEMENTS

## AUDITORS' REPORT

To the Shareholders of
Gortdrum Mines Limited

We have examined the consolidated balance sheet of Gortdrum Mines Limited and its wholly owned subsidiary company, Gortdrum Mines (Ireland) Limited as at December 31, 1969 and the consolidated statements of income, retained earnings and source and application of funds for the year then ended. Our examination of the financial statements of Gortdrum Mines Limited (the parent company) included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances. With respect to the subsidiary company, Gortdrum Mines (Ireland) Limited, of which we are not the auditors, we have carried out such enquiries and examinations as we considered necessary in order to accept for purposes of consolidation the report of its auditors.

In our opinion these consolidated financial statements present fairly the financial position of the companies as at December 31, 1969 and the results of their operations and the source and application of their funds for the year then ended, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

THORNE, GUNN, HELLIWELL & CHRISTENSON,
Chartered Accountants.

Toronto, Canada
February 12, 1970

## CONSOLIDATED BALANCE SHEET — DECEMBER 31, 1969

(with comparative figures at December 31, 1968)

### ASSETS

**Current Assets**

Cash . . . . . . . . . .
Short term securities at cost plus accrued interest (approximate market value) . . . . . . . .
Smelter settlements outstanding at estimated net realizable value . . . . . . . .
Concentrates and metal on hand (note 2) . . . . . . . .
Accounts receivable . . . . . . . .
Supplies at cost . . . . . . . .
Prepaid expenses . . . . . . . .

**Shares in Other Companies**

Shares in associated company, Northgate Exploration Limited, at cost (quoted market val
Other shares, advances and participations at cost . . . . . . . .

**Fixed Assets**

Land in Ireland at cost . . . . . . . .
Building, machinery and equipment at cost . . . . . . . .

Less accumulated depreciation (note 6) . . . . . . . .

**Deferred Charges**

Preproduction expenditures, less amortization (note 6) . . . . . . . .
Financing expense, less amortization (note 6) . . . . . . . .
Other deferred charges . . . . . . . .

### LIABILITIES AND SHAREHOLDERS' EQUITY

**Current Liabilities**

Accounts payable and accrued liabilities . . . . . . . .
Government royalty payable . . . . . . . .
Bond principal amount payable within one year . . . . . . . .
Accrued interest on bonds . . . . . . . .
Accrued Irish income tax on interest earned . . . . . . . .

**Long Term Debt (note 3)**

8% First mortgage bonds due December 1, 1972 issued by the subsidiary company,
Gortdrum Mines (Ireland) Limited U.S. $3,837,000 (1968, U.S. $5,572,000) . . . . . . . .
Less current portion included with current liabilities . . . . . . . .

Advance from Irish Base Metals Limited (U.S. $350,000) . . . . . . . .

**Shareholders' Equity**

Capital stock (note 5)
Authorized — 5,000,000 shares of $1 each
Issued — 3,860,222 shares . . . . . . . .
Deduct discount less premium on shares . . . . . . . .

Retained earnings . . . . . . . .

Approved by the Board, G. T. SMITH, Director. G. W. ARMSTRONG, Director.

See accompanying notes.

## GORTDRUM MINES LIMITED

(Incorporated under the laws of Ontario)
and its wholly owned subsidiary company
**GORTDRUM MINES (IRELAND) LIMITED**

| | 1969 | 1968 |
|---|---|---|
| | $ 185,000 | $ 214,000 |
| | 490,000 | |
| | 931,000 | 628,000 |
| | 1,538,000 | 1,757,000 |
| | 21,000 | 81,000 |
| | 274,000 | 243,000 |
| | 15,000 | 11,000 |
| | 3,454,000 | 2,934,000 |
| 69, $945,000; 1968, $1,042,500) | 472,000 | 472,000 |
| | 153,000 | 136,000 |
| | 625,000 | 608,000 |
| | 515,000 | 515,000 |
| | 4,978,000 | 3,844,000 |
| | 5,493,000 | 4,359,000 |
| | 1,046,000 | 499,000 |
| | 4,447,000 | 3,860,000 |
| | 2,109,000 | 2,483,000 |
| | 182,000 | 382,000 |
| | 7,000 | |
| | 2,298,000 | 2,865,000 |
| | $10,824,000 | $10,267,000 |

| | 1969 | 1968 |
|---|---|---|
| | $ 973,000 | $ 626,000 |
| | 91,000 | |
| | 779,000 | 914,000 |
| | 28,000 | 40,000 |
| | 52,000 | 41,000 |
| | 1,923,000 | 1,621,000 |
| | 4,126,000 | 5,992,000 |
| | 779,000 | 914,000 |
| | 3,347,000 | 5,078,000 |
| | 376,000 | 376,000 |
| | 3,723,000 | 5,454,000 |
| | 3,860,000 | 3,860,000 |
| | 1,059,000 | 1,059,000 |
| | 2,801,000 | 2,801,000 |
| | 2,377,000 | 391,000 |
| | 5,178,000 | 3,192,000 |
| | $10,824,000 | $10,267,000 |

## CONSOLIDATED STATEMENT OF INCOME
YEAR ENDED DECEMBER 31, 1969
(with comparative figures for 1968)

| | 1969 | 1968 |
|---|---|---|
| **Revenue** | | |
| Metal sales, gross value | $8,371,000 | $3,157,000 |
| Less shipping, smelting and marketing expenses | 982,000 | 460,000 |
| | 7,389,000 | 2,697,000 |
| **Operating expenses** | | |
| Operating expenses other than items set out below | 3,167,000 | 2,054,000 |
| Administrative and general expenses | 197,000 | 192,000 |
| Government royalty | 97,000 | 6,000 |
| Depreciation (note 6) | 566,000 | 490,000 |
| Amortization of preproduction expenditures (note 6) | 374,000 | 352,000 |
| Interest on bonds | 467,000 | 543,000 |
| Amortization of financing expense (note 6) | 260,000 | 191,000 |
| | 5,128,000 | 3,828,000 |
| Inventory of concentrates at beginning of year (note 2) | 1,757,000 | 122,000 |
| | 6,885,000 | 3,950,000 |
| Inventory of concentrates and metal at end of year (note 2) | 1,538,000 | 1,757,000 |
| | 5,347,000 | 2,193,000 |
| | 2,042,000 | 504,000 |
| Deduct exploration expenses | 129,000 | 251,000 |
| | 1,913,000 | 253,000 |
| Add | | |
| Dividends from associated company | 32,000 | 36,000 |
| Interest earned less Irish income tax (note 7) | 41,000 | 16,000 |
| Profit on sale of shares in associated company | | 86,000 |
| | 73,000 | 138,000 |
| Net income for the year (note 7) | $1,986,000 | $ 391,000 |
| Earnings per share | 51.5¢ | 10.1¢ |

## CONSOLIDATED STATEMENT OF RETAINED EARNINGS
YEAR ENDED DECEMBER 31, 1969
(with comparative figures for 1968)

| | 1969 | 1968 |
|---|---|---|
| Balance at beginning of year | $ 391,000 | |
| Net income for the year | 1,986,000 | $ 391,000 |
| Balance at end of year | $2,377,000 | $ 391,000 |

See accompanying notes.

## CONSOLIDATED STATEMENT OF SOURCE AND APPLICATION OF FUNDS
YEAR ENDED DECEMBER 31, 1969
(with comparative figures for 1968)

| | 1969 | 1968 |
|---|---|---|
| **Source of Funds** | | |
| Net income for the year | $1,986,000 | $ 391,000 |
| Depreciation and amortization not requiring current outlay of funds | 1,200,000 | 1,052,000 |
| Advance from Irish Base Metals Limited | | 376,000 |
| Proceeds from sale of shares in associated company less profit on sale included in net income | | 120,000 |
| | 3,186,000 | 1,939,000 |
| **Application of funds** | | |
| Additions to buildings, machinery and equipment | 1,153,000 | 453,000 |
| Purchase of shares in other companies | 17,000 | 54,000 |
| Reduction in non-current portion of long term debt | 1,731,000 | 1,179,000 |
| Other applications | 67,000 | |
| | 2,968,000 | 1,686,000 |
| Increase in working capital | $ 218,000 | $ 253,000 |

See accompanying notes.

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
YEAR ENDED DECEMBER 31, 1969

**1. Currency Conversion**

Current assets and all liabilities of the subsidiary company are converted to Canadian dollars at December 31, 1969 at the rate of exchange of \$2.57 to £1 (Sterling) which approximates the rate prevailing at that date (December 31, 1968, \$2.57 to £1). Other assets and deferred charges, and the related depreciation and amortization are converted at \$2.60 to £1 in respect of expenditures prior to January 1, 1969, and at the approximate rates prevailing when the expenditures were made after that date. Other operating accounts have been converted at the average rate of exchange prevailing during each year.

**2. Concentrates and Metal on Hand**

Concentrates and metal on hand at December 31, 1969 and December 31, 1968 have been valued at cost which is lower than estimated net realizable value.

**3. Long Term Debt**

Retirement provisions of the 8% first mortgage bonds of the subsidiary company require annual payments to a retirement fund of amounts based upon cash flow from operations, subject to specified minimum required redemptions. The bond principal of \$779,000 included in current liabilities at December 31, 1969 represents the

estimated payment to the retirement fund required in 1970 based upon cash flow from operations. The minimum amounts of bonds required to be retired, regardless of cash flow, are as follows:

| | |
|---|---|
| U.S. $ 340,000 | on December 1, 1970 |
| 1,500,000 | on December 1, 1971 |
| 1,997,000 | on December 1, 1972 |
| $3,837,000 | |

Redemptions in any year in excess of the minimum amounts shown above will reduce the minimum required redemption in the immediately following year.

Pursuant to financing arrangements made in 1966 whereby Northgate Exploration Limited and its subsidiary company, Irish Base Metals Limited, guaranteed the 8% first mortgage bonds of the subsidiary company,

(a) an amount of U.S. $350,000 was advanced to the subsidiary company by Irish Base Metals during 1968. This advance is payable without interest after all of the 8% first mortgage bonds have been retired.

(b) the company has granted an option to Northgate Exploration Limited to purchase 150,000 shares of its capital stock at $4 per share exercisable on or before December 1, 1972.

### 4. Contingent Liability

A claim was made against the subsidiary company for loss of profits arising from the alleged repudiation of obligations under a concentrate sales agreement and for damages as a result of the unexpected presence of mercury in the concentrates. No provision was made at December 31, 1968 for this claim as the company denied liability. In 1969 the claim was settled at a cost of approximately $300,000.

### 5. Capital Stock

An officers' and employees' stock option plan was initiated in 1969. Under the plan options to purchase shares of capital stock may be granted at a price of not less than 90% of market value on the date of granting such options. The aggregate number of shares available under the plan is 250,000 and options, having a term of up to five years, may be granted for a period of ten years from the date of adoption of the plan.

### 6. Depreciation and Amortization

Depreciation of fixed assets has been recorded at the rates set out below, bearing in mind the expected useful life of the assets and the life of the estimated ore reserves.

| | |
|---|---|
| Crusher, mill, dryer, storage plants and related machinery and equipment | 12½ % per annum |
| Mercury extraction plant | 20 % per annum (from Oct. 1, 1969) |
| Mobile equipment | 25 % per annum |
| Employees' housing in Limerick | Nil |

Preproduction expenditures are being amortized over the estimated life of the mine.

Financing expenses applicable to the first mortgage bonds are being amortized in accordance with the agreed schedule of retirements (note 3), but with appropriate additional amortization where bonds are redeemed, as required, in advance of the annual retirement schedule.

### 7. Income Taxes

Under present laws income from the subsidiary company's mining operations at Tipperary is exempt from tax for twenty years from the date of commencement of production and dividends from the subsidiary company if, as and when paid, are not subject to Canadian income taxes or to Irish withholding tax.

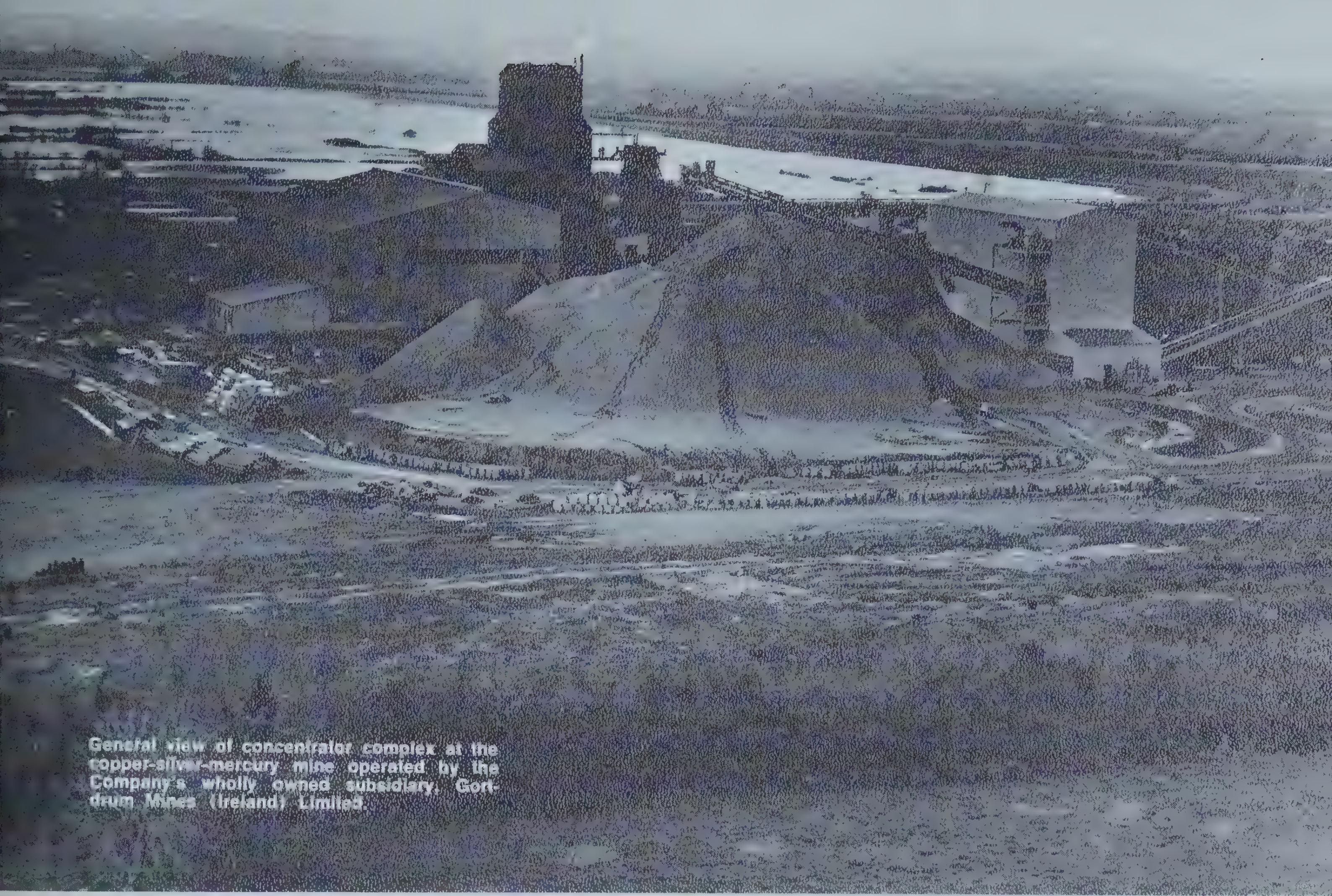
Irish income tax on interest earned by the subsidiary company has been deducted from interest earned in the statement of income in the amount of $57,000 for 1969 and $41,000 for 1968.

### 8. Remuneration of Directors and Senior Officers

Remuneration of the company's directors and senior officers (as defined by The Corporations Act of Ontario) amounted to $53,000 for 1969 and $64,000 for 1968.

### 9. Reclassification

The 1968 comparative figures have been reclassified on the basis of the 1969 financial statement presentation.




# REPORT ON OPERATIONS

## Production

A total of 516,764 tons of ore was treated in the concentrator during the year. The average grade was 1.08% copper and 0.86 ounce of silver per ton. The average daily treatment rate was 1,415 tons. This compares with a total of 472,366 tons treated during 1968 of an average grade of 1.12% copper and 0.99 ounce of silver per ton.

Concentrate production in 1969 amounted to 13,153 tons of an average grade of 36.06% copper and 27.54 ounces of silver per ton. The calculated average recovery rate was approximately 85.0% for copper and 81.5% for silver. The comparable figures for 1968 were 14,661 tons of concentrates of an average grade of 32.25% copper and 27.10 ounces of silver per ton and calculated average recoveries of approximately 89% for copper and 88% for silver.

The decline in the tonnage of concentrates produced in 1969 as compared to 1968 was primarily due to lower recoveries and the moderate reduction in the average grade of ore treated. However, as evident in the foregoing concentrate grades, the copper and silver content was higher.

During the three months ended March 31, 1970, a total of 133,867 tons of ore was treated with an average grade of 0.92% copper and 0.84 ounce of silver per ton. Concentrate production

amounted to 3,312 tons of an average grade of 31.55% copper and 28.84 ounces of silver per ton. The calculated recovery rate was 85.3% for copper and 85.0% for silver. The concentrates produced during this period contained an estimated 1.29% mercury. This was the result of treating ore that was above average in mercury content.

Present forecasts for 1970 envisages an average mercury content of 0.84% Hg in the concentrate feed and the production of approximately 12,000 tons of roasted concentrates during the full 12 months. This forecast also assumed the recovery of 1,440 flasks of mercury in the same period. This is based on a recovery rate of 67.5%.

### Mercury Plant

Initial treatment of concentrates in the mercury extraction plant commenced during July of 1969. However, owing to a variety of mechanical and other problems principally with respect to the cooling system, it was not until November that more continuous operations were achieved.

Total roasted concentrates produced in the mercury plant during 1969 amounted to 2,669 tons assaying 33.07% copper, 26.84 ounces of silver per ton and 0.07% mercury. A total of 420 flasks (76 lbs. per flask) of mercury was recovered.

Some of the problems experienced in the earlier operation of the plant still persist. During the three months ended March 31, 1970, 2,692 tons of roasted concentrates were produced assaying 32.88% copper, 29.56 ounces of silver per ton and 0.10% mercury. A total of 316 flasks of mercury was recovered.

Although the mercury content of the concentrate feed to the plant during the three months ended March 31, 1970, was appreciably higher at a calculated average of 1.21 Hg as compared to the grade of approximately 0.80% Hg treated latterly in 1969, mercury recovery was significantly lower with a considerable tie-up of metal in the circuit. The latter factor makes the recovery rate uncertain. Under optimum conditions, recoveries of approximately 90% or better may be achieved.

Work is being carried out in an effort to improve the metal extraction and laboratory tests have indicated that the addition of Whifley table could prove effective in achieving higher recoveries.

### Mining

The program of selective mining to provide concentrate feed that was low in mercury continued throughout the year. During 1969, a total of 977,600 tons of ore was mined, of which 460,836 tons were stockpiled for future treatment.

Development of the open pit was extended to Bench No. 7 at the western end. This is approximately 175 feet below surface. As deepening of the pit has progressed at this end, ground conditions of the south wall have shown signs of deterioration. As previously reported, it has been necessary to modify the originally planned steep slopes of the pit wall owing to incompetent rock conditions, resulting in an increase in the amount of waste to be mined.

At present, the pit bottom in the east end has reached Bench No. 3, or approximately 75 feet below surface.

Studies are continuing on the design of the open pit and from the areas exposed to date, it is indicated that some flattening of the final slopes will be necessary. It is also apparent that these conditions will be experienced in the east end of the pit and may eventually reduce the estimate of recoverable reserves, particularly with respect to the area below Bench No. 14.

During the three months ended March 31, 1970, a total of 195,000 tons of ore were mined of which 76,100 tons were added to the stockpiles. Of the total 133,867 tons treated in the concentrator during this period, approximately 118,900 tons were obtained from mining, the remaining 14,967 tons were reclaimed from existing stockpiled ore.

## Ore Reserves

Estimated assured ore reserves in the mine open pit down to and including Bench No. 18, as at January 1, 1970, are as follows:

| | Grade | |
|---|---|---|
| Tons | Copper % | Silver ozs/ton |
| 2,513,200 | 1.46 | 1.02 |

**Note:** The above ore reserve does not include an estimated 301,200 tons of ore grade material averaging 1.24% copper and 0.88 ounces of silver per ton located adjacent to but outside the current open pit design, nor does it include 151,800 tons of low grade material averaging 0.42% copper and 0.33 ounces of silver per ton within the open pit limits. Since the year end, further studies have been made which indicate that the ore below Bench No. 14 may not be mined, in which event the above reserve would be revised to 2,270,000 tons averaging 1.40% copper and 1.00 ounces of silver per ton.

**Stockpiled Ore as at January 1, 1970**

| | Grade | |
|---|---|---|
| Tons | Copper % | Silver Ozs./ton |
| 79,900 | 0.51 | 0.36 |
| 698,500 | 0.59 | 0.41 |
| 122,000 | 0.99 | 0.69 |
| 52,800 | 0.60 | 0.42 |
| 50,000 | 0.97 | 0.68 |
| 1,003,200 | 0.65 | 0.45 |

**Note:** The above figures exclude lower grade stockpiled material amounting to 216,800 tons averaging 0.44% copper and 0.31 ounce of silver per ton.

The mercury content of the open pit reserves and the stockpiled ore is difficult to determine within close limits and estimated probable recoveries have not yet been resolved. For the purposes of production projections it is assumed that between 700,000 and 900,000 pounds of mercury may be recovered during the life of the mine.

## Concentrate Inventory

Concentrate stocks at the year end amounted to 4,505 tons assaying 33.3% copper and 27.6 ounces of silver per ton. Substantially all of this material will be treated in the mercury plant prior to shipment.

## Mining and Milling Costs

Direct operating costs per ton of ore treated in the concentrator, which includes mining, milling, mine services, mine administrative expenses, transportation of concentrates, stockpiling and loading, together with head office costs in Ireland, amounted to $5.58 during 1969. The comparable figure for the preceding year was $4.79 per ton.

Operating costs during the current year are expected to be moderately higher owing to the escalation of labor and materials costs, as well as the necessity of mining additional quantities of waste rock resulting from the flattening of the slope of the pit walls.

## Employee and Industrial Relations

At December 31, 1969, total personnel at the mine was 231, including 81 employees of the mining contractor. A total of 27 persons are employed in the mercury plant.

Labor relations within the Company have been generally good throughout the year and no worker stoppage has resulted. The agreement covering certain of the employees with the Irish Transport and General Workers' Union, expired on April 30, 1970. Negotiations are now in progress for the renewal of this contract. The Company was approached late in 1969 by the National Engineering and Electrical Trade Union to negotiate an agreement covering the fitters and electricians. Discussions have been initiated on the understanding that this union will represent all the Company's employees in this category.

Some labor difficulties were experienced by the mining contractor and three short unofficial strikes by a majority of the contractor's employees occurred during the year. This resulted in an interruption of milling for a total of about three working days due to a shortage of concentrator feed.

A contract was negotiated between the mining contractor and the Irish Transport and General Workers' Union on February 20, 1970. Previously the employees of the mining contractor were not represented by any union.

**Above: — Mine open pit.**

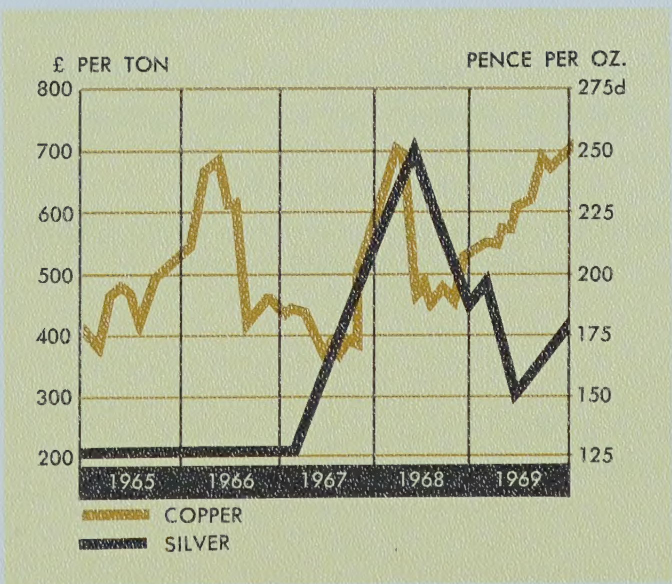
**Below: — Concentrator complex — from left to right: mercury plant, main concentrator building, crusher building and fine ore storage. Administration building in foreground.**

## Metal Prices

A graph showing the average spot prices for copper and silver on the London Metal Exchange covering the years 1965 to 1969, inclusive, is appended. Prices shown for copper are expressed in Sterling per long ton (2,240 lbs.) and those for silver are quoted in pence per ounce. On January 1, 1970, the London Metal Exchange commencing quoting prices for base metals in metric tons (2,204.6 lbs.).

The year end closing price for copper was £705 per long ton or the equivalent of about 80.5¢ per lb. in Canadian funds. The closing price for silver was approximately 175 pence per ounce or the equivalent of about $1.88 per ounce in Canadian funds.

The pricing basis for the copper and silver contained in the concentrates produced and sold during 1969 was determined by London Metal Exchange quotations. The approximate weighted average price received for copper and silver in equivalent Canadian funds was 71¢ per pound for copper and $1.92 per ounce for silver.



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